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SUMMARY

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Sudan

PULP AND PAPER

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PULP AND PAPER

by

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Paper is one of the corner-stones of civilisation. It is required for dissemination of news, for the transfer of knowledge and for the preservation of history and experience in all forms of life.

Cellulose may be regarded as the fibrous skeleton on which a sheet of paper is built. The raw material to be used will be determined from economic considerations as well as its technical suitability and also its availability in the country. The field and quality of cellulose must be satisfactory, and the costs of conveying the material to the pulp mill, the processing costs, and the transport costs of conveying the finished products to the market are also of paramount importance.

In the Sudan it is found that there is an annual increase of the total consumption of different types of paper. So investigations are made and a number of suitable raw materials have been found available in the Sudan, the most important ones are :-

Papyrus, Bagasse, Cotton Stalks, Esparto Grass, Sudanese Grass and Bamboo.

Papyrus :

The Sudd region of the Sudan would appear to be one of the greatest unexploited sources of cellulose raw material in the world. There is a dense area of papyrus growth of some 150 million tons covering an area of about 5,000 square miles and yielding approximately 45 tons to the acre. Furthermore since the plant grows to full height in just over 3 months, there is a possibility of 3 crops per year.

Samples of papyrus were sent to the Imperial Institute, London, for experiments to show its value as a paper making material in comparison with esparto grass. The results of the experiments showed that papyrus is very good as a paper making material. Also the yield of pulp from the East Africa papyrus was found to be slightly less than that from the Sudan sample.

Paper making trials were carried out with the two samples of papyrus at the Imperial Institute and the results showed that the manufactures of fairly good paper from this material is possible :

The problems are largely ones of collection, transport and because of the relatively high costs, export opinion concluded that the only economic method was conversion into pulp

on the spot.

Cotton Stalks:

Cotton is by far the most important crop in the Sudan. The greatest part of the crop is cultivated in the Gezira Scheme, whose beginning on a major scale dates from 1925. The total irrigated area is now about 1,557,000 feddans.

Various attempts have been made to utilise waste cotton stalks for the production of pulp and for other industrial purposes such as the manufacture of sacking materials, building materials etc. All such attempts came to end due to the fact that the Gezira cotton type can be infected with black arm and unless the stalks are burnt the probability of an infestation for the next season crop cannot be eliminated. This has to continue for some years and for such a time that other reliable methods for combating the desease, other than by burning the stalks, are found.

However, cotton resistant to black arm desease, is grown in other regions of the Sudan, such as Upper Nile, the Gash and Tokar Delta (Kassala Province), Equatoria, Nuba Mountains, Gedaref and some other miner places. In these areas the chances for utilising cotton stalks are not handicapped. For this reason the Government constructed a cardboard factory at Aroma (Gash Delta) designed to utilise waste cotton stalks.

Bagasse :

The Sudanese Government constructed a sugar factory in the Blue Nile Province at El Guneid. So they will use the bagasse produce for the manufacture of pulp from the fibres. This will be sufficient to cover the requirements of the paper mill.

Other raw materials:

Bamboo : Bamboo grows in abundance in the South of the country, far distant from the papyrus area. Its utilisation, however, would probably not be profitable. There is, with the papyrus, a type of bamboo with a maximum height of some 4 or 5 metres, a thickness, of only that of a human thumb. Its relative growth is probably some 5% of the papyrus of the area. There may be a possibility of utilising this bamboo for the paper and pulp manufacture.

Esparto Grass: It is available in abundance in the South of the country and is excellently suited for certain types of coated paper.

As a matter of fact, many companies applied for an Approved Enterprise, so as to manufacture paper in the Sudan. So it is natural, as we have a lot of raw materials which showed to be satisfactory in paper production and also as the demand of the country is in a noticable increase in every year.

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